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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,657

12/21/2006

Joachim Bangert

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EXAMINER

LUU, PHO M

ART UNIT

PAPER NUMBER

2824

NOTIFICATION DATE

DELIVERY MODE

07/23/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketingDept@young-thompson.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/552,657	<b>Applicant(s)</b> BANGERT ET AL.	
	<b>Examiner</b> PHO M. LUU	<b>Art Unit</b> 2824	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 13-23 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-15 and 18 is/are rejected.
- 7) ☒ Claim(s) 16, 17 and 19-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>01/27/09; 10/11/05</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Preliminary Amendment***

1. Acknowledgment is made of applicant's Preliminary Amendment filed October 11, 2005. The changes and remarks disclosed therein were considered.
2. Claims 1-12 has been canceled
3. Claims 13-23 are pending in the application.
4. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Drawings***

5. The drawings were received on October 11, 2005. These drawings are review and accepted by examiner.

### ***Information Disclosure Statement***

6. Acknowledgment is made of applicant's Information Disclosure Statement (IDS) Form PTO-1449, filed January 27, 2009. The information disclosed therein was considered.

Acknowledgment is made of applicant's Information Disclosure Statement (IDS) Form PTO-1449, filed October 11, 2005. The information disclosed therein was considered.

### ***Specification***

7. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it uses the phrase **"OF THE DISCLOSURE"**, **"The invention relates"** and **"comprising"** in line 1, 2 and 3; respectively, which are implied. Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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9. Claims 13-15 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Komori (US. 6,552,926).

Regarding claim 13, Komori in Figures 1-15 are directly discloses a component **(MRAM 1)** with a logic circuit **(access transistor 10 such as a logic circuit)**

arrangement with configurable functionality, comprising

a plurality of data lines **(electrodes 11, 12 such as a data line)**, at least a portion of the data lines being assigned at least one element **(TMR 7)** that can be switched **(an access transistor 10 such as a switch state circuit)** between two states with different discrete resistances **(for example, TMR 7 includes an electrodes 11, 12 coupled to the access transistor 10 in substrate MRAM 1)**

by means of which element **(TMR 7)** the data line **(electrodes 11, 12 such as a data line)** is enabled or inhibited depending on the switched state, it being possible for the switching state of the element **(TMR 7)** to be stored in nonvolatile fashion and to be changed over rapidly **(for example, TMR 7 includes an electrodes 11, 12 coupled to the access transistor 10 in substrate MRAM 1)** characterized in that a pass transistor **(access transistor 10 such as a pass transistor includes a source/drain 9 and control gate 8)** connected into the data line **(electrodes 11, 12 such as a data line)** is inhibited or enabled by means of the element **(TMR 7)**, or in that the element **(TMR 7)** itself is used as the pass transistor that enables or inhibits the data line **(electrodes 11, 12 such as a data line)** **(for example, TMR 7 includes an electrodes 11, 12 coupled to the access transistor 10 in substrate MRAM 1).**

Regarding claim 14, Komori in Figures 1-15 disclosed that the element **(TMR 7)** is an element exhibiting a magnetoresistive effect **(TMR 7 such as magnetoresistive)**.

Regarding claim 15, Komori in Figures 1-15 disclosed that the element **(TMR 7)** is a TMR cell **(TMR 7 such as a cell in MRAM 1)**.

Regarding claim 18, Komori in Figures 1-15 disclosed that the pass transistor **(access transistor 10)** connected into the data line **(electrodes 11, 12)** being inhibited or enabled by means of the element **(TMR 7)**, characterized in that only one element **(TMR 7)** coupled to one another and operated in parallel is/are provided for actuating the pass transistor **(access transistor 10)** **(for example, TMR 7 includes an electrodes 11, 12, which are coupled to the access transistor 8)**.

***Allowable Subject Matter***

10. Claims 16-17 and 19-23, insofar as in compliance with the rejection above, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The cited are, whether taken singularly or in combination, especially when all limitations are considered within the claimed specific combination, fail to teach or render obvious of a characterized in that the element exhibits a resistance change as a result of a phase change generated during switching, in particular from an amorphous state to a crystalline state (claims 16-17), a characterized in that two TMR cells (2) are provided, which are driven in inverted fashion (claims 19-20), a characterized in that the element

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is connected in parallel with the data line and short-circuits the latter or behaves in transparent fashion (claims 21-22) and a characterized in that the switching time for changing over the resistance of the element is  $\leq 5$  ns, in particular  $\leq 3$  ns (claim 23).

### ***Conclusion***

11. **Examiner's note:** Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

**Prior Art not relied upon:** Please refer to the references listed in attached PTO-892, which, are not relied upon for claim rejection since these references are relevant to the claimed invention.

12. When responding to the office action, Applicant are advised to provide the examiner with line numbers and page numbers in the application and/or references cited to assist the examiner to located the appropriate paragraphs.

A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the data of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02 (b)).

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Pho M. Luu whose telephone number is 571.272.1876. The Examiner can normally be reached on M-F 8:00AM – 5:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Richard Elms, can be reached on 571.272.1869. The official fax number for the organization where this application or proceeding is assigned is 571.273.8300 for all official communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Pho M Luu/  
Primary Examiner, Art Unit 2824.